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By: Ann Bates, Idaho Nursery & Landscape Association  
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These funds were given to the Idaho Nursery & Landscape Association to print the Plant This Not That Magazine, an Alternative Plants to Invasive Species Landscaping Publication.

The magazine will educate and assist consumers in choosing trees and other plants that will not become invasive or harm the environment. Nationally recognized experts have created a series of steps that can be taken to help curb the spread of invasive species. Alternative Plants to Invasive Species walks the reader through the steps and helps them to make informed decisions about alternative trees and other plant material.

The magazine and pull out center explains how to remove invasive species and offers suitable horticultural substitutes that closely resemble invasive plants commonly used in landscapes. With the gardening public becoming more educated as to the correct choice of plant material all segments of the nursery industry will benefit. Growers can phase out growing plants that are undesirable and replace with more sought-after ones, retail outlets and landscape contractors will be able to work one on one with consumers to insure that they make informed and wiser choices of plant material and lawn maintenance companies will be able to direct the consumer in the removal of invasive plants that are currently in the landscape.

To receive the largest exposure to the public, the Idaho Nursery and Landscape Association will to distribute this magazine and pull out center to University of Idaho Extension offices, botanical gardens statewide, at the Idaho Horticulture Expo, the Boise Flower & Garden Show and at the Idaho Green Expo. It will also be offered (and delivered) to retail outlets for distribution.

Contributors include:

- Idaho State Department of Agriculture
- Idaho Invasive Species Council
- Idaho Botanical Garden
- Idaho Preferred®
- College of Western Idaho
- College of Southern Idaho
- Urban and Community Forestry, Idaho Dept. of Lands
- University of Idaho
- Kootenai County
- Bureau of Land Management

2011 ANNUAL ISSUE NO. 1

# GARDENING and Landscaping for Idaho

Idaho Friendly Plants  
Much Ado About Weeds  
Firewise Gardening  
Ornamental Grasses In The Landscape  
Idaho Preferred Garden Gala  
Water Gardening In Northern Idaho  
Going Native In Your Idaho Landscape  
Doing Time At The Idaho Botanical Garden

"Plant This Not That"  
Handy Reference Section  
Store In Your Vehicle For Easy Reference



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 ph: (208) 332-8686; fax: (208) 334-2840  
 email: [invasivespecies@agri.idaho.gov](mailto:invasivespecies@agri.idaho.gov)  
 website: [www.agri.idaho.gov](http://www.agri.idaho.gov)

**Editors:** Amy Ferriter and Julie Jacobson  
**Associate Editors:** Laura Morris, Ann Bates  
**Art Director/Designer:** Tara Roark, Julie Jacobson  
**Assistant Designer:** Kelly Roark  
**Photographer:** Tara Roark  
**Writers:** Amy Ferriter, Ann DeBolt, Nina Eckberg, Steve Love, Roger Rosenkreier, Julia Rundberg, Julie Jacobson and Leah Clark



## *Contributors to Gardening & Landscaping in Idaho Magazine:*

Idaho State Department of Agriculture  
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# Idaho Friendly

ALTERNATIVES FOR YOUR IDAHO LANDSCAPE

Peruse a gardening book published before 1980, and you will find plenty of familiar plant species. Some of the West's worst weeds were introduced as ornamentals; such as purple loosestrife, salt cedar, and tree of heaven. Others show up in wildflower mixes; to list a few, oxeye daisy, bachelor's button and yellow toadflax. Unfortunately, many are exotic species that are now are widespread in Idaho's roadsides, agricultural lands and natural areas. Some plant recommendations from the past no longer are considered environmentally sound. Removing these plants from your private property can eliminate a major source of invasion.

Some invasive plants serve a function in the landscape – who can deny the shade provided by a black locust or the showy color display of yellow-flag iris? Removal of these plants may seem like a sacrifice for the homeowner, but it can be a short-term problem with long-term benefits to Idaho's wildlands.

So how do you remove the Russian olive that shades the popular neighborhood tree fort? The first step is to consider the value of the tree in your landscape. What does it do in the landscape – does it provide shade or privacy? Has it been some time since you really looked at that old tree? Is it scraping the roof of the house? Does the fruit stain the driveway? Is it really that valuable?

The following guidelines explain how to remove invasive species on your property and offer suitable substitutes that closely resemble some invasive plants commonly used in landscapes. In choosing plant substitutes, consider height, growth rate, hardiness, foliage texture, flowering characteristics, light and nutritional requirements.

Please check with your local government and/or homeowner association for specific tree removal regulations. Many require permits or permission to remove and/or alter vegetation in your landscape. On the other hand, some local governments now require removal of certain invasive exotic plants.

**We need your help to Keep Idaho, Idaho.**

## How To:

The following recommendations are not absolute and may vary due to your particular situation.

**Alternative 1: Remove it.** Call a certified arborist to cut down the tree and have the stump ground. This procedure is recommended for trees that present immediate hazards to safety or structures.

**Alternative 2: Treat the plant with a herbicide.** Trees can be controlled by applying herbicides in many different ways. Techniques include girdling, cut stump, foliar and basal bark treatments.

**Alternative 3: Phase the plant out of your landscape.** When dealing with trees, this procedure could require at least five years. First, judge the landscape effect and value of the plant. If it is a tree, what is it providing – shade, privacy, a specimen? Then choose an appropriate replacement. A variety of replacement options have been provided for you in the 'Plant This, Not That' section of this magazine. To phase a pest tree out of your landscape, place the new tree 10-15 ft away from the existing tree. Remember that it will take six to twelve months for most trees to become established. Thin the existing pest plant by 25 percent within the next 30 days. Repeat this procedure annually for the next four years. Remove the remaining portion of the pest tree and grind the stump in year five. You now should have an established alternative tree that gradually will fulfill similar requirements as the tree that was removed.

**Alternative 4: Remove the existing tree and replace it with a containerized or B&B tree of similar size.** In most cases professional assistance will be required to install large replacement trees. Beware of sunburn. When removing or thinning a large tree, the understory is acclimated to shaded conditions. With the removal of an entire or even partial canopy, increased light can sunburn desirable species below – such as grasses and shrubs. This can include temporary leaf and stem burn, defoliation or even death of the plants. The safest technique is gradual removal.

**Note:** when replacing trees, watch for underground and overhead utilities. In all circumstances, trees with mature height in excess of 15 ft should not be planted within 15 ft of overhead power lines.





"Sweet flow'rs are slow  
and weeds make haste."

- William Shakespeare,  
*The Tragedy of King Richard the Third*  
(Duke of York at II, IV)



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about

# WEEDS

BY AMY FERRITER

## Idaho Noxious Weed List

The Idaho State Department of Agriculture is responsible for administration of the State Noxious Weed Law. The Department provides support, training, and organizational assistance to counties and Cooperative Weed Management Areas (CWMAs) throughout the state. CWMAs are formed when the landowners and land managers of a given area come together and agree to work cooperatively to control weeds. Idaho has over 30 CWMA's covering 87 percent of the state. Idaho has 64 different species of weeds that are designated "Noxious" by state law. These weeds are designated into three levels of concern. The highest priority weeds are listed on the "Early Detection and Rapid Response" (EDRR) list. The second tier of noxious weeds are those listed on the "Control" list. The third tier of noxious weed species is the "Contain" list. The Idaho Noxious Weed list can be accessed at: [www.agri.idaho.gov](http://www.agri.idaho.gov)

## Federal Noxious Weed List

The United States Department of Agriculture requires permits for the importation and/or interstate movement of Federal Noxious Weeds under the authority of 7 CFR 360. You will find a list of the regulated taxa in 7 CFR 360.200. Section 403 of the Federal Plant Protection Act defines Noxious Weed as: "any plant or plant product that can directly or indirectly injure or cause damage to crops (including nursery stock or plant products), livestock, poultry, or other interests of agriculture, irrigation, navigation, the natural resources of the United States, the public health, or the environment."

## Unregulated Weeds

There are some weedy species that are not regulated by the federal government or the state of Idaho. These species have been observed as spreading from planted areas and/or are weedy in other parts of the country. Many Idaho landscape professionals have collaborated on the plants on this list and they all agree, these plants are extremely aggressive and very difficult to control once they have been introduced into the landscape. They have been included in this publication to encourage voluntary removal and replacement in home and garden landscapes.



# Voluntary Codes of Conduct for the GARDENING PUBLIC

*Nationally recognized experts have created a series of steps to help nursery professionals, landscape architects and gardeners curb the spread of invasive horticultural plants. The following findings and principles were agreed upon:*

## Findings

People are major dispersers of plants.

The magnitude of this dispersal is unprecedented and has allowed dispersal of species that manifest aggressive traits in new areas.

Plant introduction and improvement are the foundation of modern agriculture and horticulture, yielding diversity in the types and supplies of plants used for food, forestry, landscapes and gardens, medicinal and other purposes.

A small proportion of introduced plant species become invasive and cause unwanted impacts to natural systems and biological diversity as well as the economy, recreation and health.

Plant species can be invasive in some regions, but not in others.

The impacts of invasive plant species can occur at times and places far removed from the site of introduction.

## Principles

Plant introduction should be pursued in a manner that both acknowledges and minimizes unintended harm.

Efforts to address invasive plant species prevention and management should be consistent with national goals or standards, while considering regional differences to the fullest extent possible.

Prevention and early detection are the most cost-effective techniques against invasive plants.

Research, public education and professional training are essential to a fuller understanding of the invasive plant issue and positively affecting consumer demand, proper plant use, development of non-invasive alternatives and other solutions.

Individuals from many fields must come together to undertake a broad-based and collaborative effort addressing the challenge. Those fields must include leaders in horticulture, retail and wholesale nurseries, weed science, ecology, conservation groups, botanical gardens, garden clubs, garden writers, educational institutions, landscape architects, foundations and government.

A successful invasive plant species strategy will use all available tools, including voluntary codes of conduct, best management practices and appropriate regulation.

Codes of conduct for specific communities of interest are essential for encouraging voluntary initiative, fostering information exchange, and minimizing the expense of regulation.

See:

[www.centerforplantconservation.org/invasives](http://www.centerforplantconservation.org/invasives) for the full Gardening Codes of Conduct and The St. Louis Declaration on Invasive Plant Species.





# FIREWISE *Landscaping*



BY ROGER ROSENTRER & ANN DEBOLT

As the number of people living in and adjacent to wildlands grows, the likelihood of homes being threatened by wildfire has also grown. Since it isn't a question of "if" a wildfire will occur in these areas but "when", the likelihood of human life and property loss is great. However, research clearly demonstrates that pre-fire activities save lives and property. Firewise landscaping, usually included as one such pre-fire activity (also referred to as "vegetation management"), is all about reducing the wildfire threat to a home by changing the characteristics of the adjacent vegetation. Many people do not view the plants growing on their property as a threat. But in terms of wildfire, what is growing adjacent to the home can have a considerable influence on the survivability of a given property.

All vegetation, including naturally occurring native plants and ornamental plants in the residential landscape, is potential wildfire fuel. If vegetation is properly modified and maintained, a wildfire can be slowed, the length of the flames shortened, and the amount of heat reduced, all of which assist firefighters in protecting the home. While nothing short of drastic measures will fireproof your home, employing the following practices will greatly increase the defensible space around it and reduce your exposure to fire and its potential impacts.

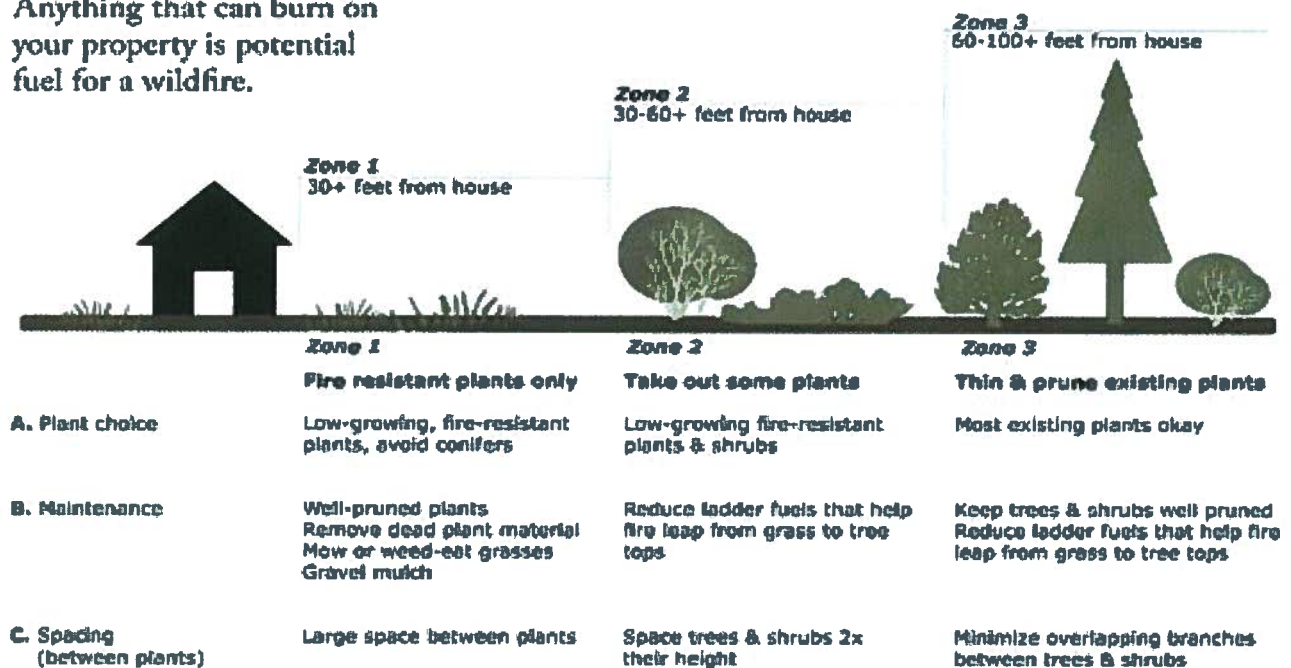
1. Initiate the zone concept (see diagram). Zone 1 is closest to the structure (within 30 feet); Zones 2-3 move progressively further away (30-100+ feet).
2. In Zone 1, plant widely spaced, low-growing non-resinous species with high moisture content; an irrigated lawn can also be an effective firewise feature.
3. Do not plant under decks, windows, and vents and use only non-flammable mulches.
4. Maintain Zone 1 well; it should be lean, clean and green.
5. In Zone 2, emphasize low-growing plants up to 18" tall, such as fire resistant ground covers or compact, medium-sized shrubs and trees (remember: fire resistant does not mean fireproof!).
6. Separate trees and shrubs by 2x their mature height; prune all lower branches within 10' of the ground.
7. Plant in small irregular clusters or islands (not in masses) and remove any excess brush or vegetation.
8. In Zone 3, keep shrubs and trees well pruned and minimize overlapping branches between trees and shrubs.
9. Remove "ladder fuels" – vegetation that serves as a link between grass and tree tops.
10. Give yourself added protection where possible with "fuel breaks" like gravel walkways, lawns, driveways, and non-flammable parking areas.

*Your landscape can be  
attractive and fire resistant*

# THE WISE CHOICE

*Design your landscape to defend your home*

Anything that can burn on  
your property is potential  
fuel for a wildfire.



Fire travels faster uphill so increase these distances if your property slopes.



# Possible Plants for the Firewise Landscape

## Possible Plants for the Firewise Landscape

The following plants have one or more characteristic that may help increase fire safety if incorporated into the landscape. Characteristics include low stature, high moisture content, no volatile oils, high salt content, or minimal production of dry, twiggy material (as long as they are maintained properly).

### Fire-resistant Ground Covers

- Pinks (*Dianthus*)
- Creeping phlox (*Phlox subulata*)
- Periwinkle (*Vinca major*)
- Stonecrop (*Sedum*)
- Snow-in-summer (*Cerastium tomentosum*)
- Japanese pachysandra (*Pachysandra terminalis*)
- Hardy iceplant (*Delosperma*)
- Hens and chicks (*Sempervivum*)
- Pussytoes (*Antennaria*)

### Fire-resistant Herbaceous Perennials

- Daylily (*Hemerocallis*)
- Beardtongue (*Penstemon*)
- Hardy Geranium (*Geranium*)
- Lupine (*Lupinus*)
- Lamb's ear (*Stachys lanata*)
- Yucca (*Yucca*)
- Red-hot poker (*Kniphofia uvaria*)
- Tickseed (*Coreopsis*)
- Blanket-flower (*Gaillardia*)
- Iris (*Iris*)
- Evening-primrose (*Camissonia, Oenothera*)
- Purple coneflower (*Echinacea purpurea*)

### Fire-resistant Shrubs

- Mock-orange, *Syringa* (*Philadelphus*)
- Sumac (*Rhus*)
- Lilac (*Syringa vulgaris*)
- Currant (*Ribes*)
- Oregon grape (*Mahonia, Berberis*)
- Cotoneaster (*Cotoneaster*)
- Serviceberry (*Amelanchier*)
- Boxwood (*Buxus*)
- Dogwood (*Cornus*)
- Rose (*Rosa*)
- Spirea (*Spiraea*)
- Viburnum (*Viburnum*)
- Saltbush (*Atriplex canescens*)
- Buffaloberry (*Shepherdia argentea*)
- Snowberry (*Symphoricarpos*)

- Cherry, Plum, other (*Prunus*)
- Firethorn, *Pyracantha* (*Pyracantha*)
- Bitterbrush (*Purshia tridentata*)
- Chokecherry (*Prunus virginiana*)

Fire-resistant Trees (conifers are generally flammable because of their resin, but the 2 listed below have thick bark and are more fire-resistant; they are common western species and blend well with the surrounding vegetation when grown in forested zones)

- Willow (*Salix*)
- Maples (*Acer*)
- Aspen (*Populus tremuloides*)
- Cottonwood (*Populus*)
- Alder (*Alnus*)
- Hawthorne (*Crataegus*)
- Ash (*Fraxinus*)
- Oak (*Quercus*)
- Sweetgum (*Liquidambar styraciflua*)
- Mountain ash (*Sorbus*)
- Crabapple (*Malus*)
- Ponderosa pine (*Pinus ponderosa*)
- Western larch (*Larix occidentalis*)





# IDAHO PREFERRED®

## *Garden Gala*

*by Leah Clark*

**W**hat better way to enjoy your private Idaho habitat than to host a garden party! Outdoor entertaining is by its very nature relaxed - and it's easy to plan with no need for house cleaning and decorating! Beautiful surroundings provided by colorful native plants, the soft chattering of birds, good food and friends is all you need for a successful Idaho garden gala.

To keep your party fun and relaxed, plan a menu that includes foods that can be prepared in advance. Choose foods that are light, but flavorful - simple yet elegant. When designing your menu, consider using local seasonal foods. Idaho food production is as diverse as the plants that make up your garden. Whether your party is in the spring, summer or early fall, you can find local ingredients at grocery stores, farmers markets or perhaps from your own vegetable garden. Look for Idaho Preferred® fruits, vegetables, meats, breads and wines to complement your menu. Your guests will enjoy the freshness and quality of local foods and appreciate the opportunity to enjoy native surroundings and support local producers.

### MENU

#### *Starters*

Peach Mojitos  
Green Garbanzo Hummus with  
Black Bread Squares  
Fresh Seasonal Vegetables with Blue  
Cheese Dip  
Flavored Fresh Cheese Curds

#### *Dinner*

Fresh Tomato Cucumber Gazpacho  
Caesar Salad with Smoked Trout  
Grilled Pork and Nectarines  
Idaho Potato Salad  
Sourdough Bagnettes  
Idaho Dry Riesling

#### *Dessert*

Bing Cherry Chocolate Pie  
Fresh Seasonal Fruits  
Idaho Ice Wine





IDAHO PREFERRED®



Menu Recipes Menu



Each year, Idaho produces over 13 million pounds of sweet juicy produce. This popular fruit is available from August through October and, throughout the year, the pearlar, can be found under its summer starting in July. Idaho will make flow and refreshing drinks a summer tradition. As with any season, fresh fruit is essential. Idaho grows both green and yellow and peaches and pears and it is a favorite treat and some small local retailers throughout the summer.

Place patches for sewing them on a boundary or final piece of wood. Sew until smooth. Put pencil marks through a line square and stretch the measuring cord. Continue from time to time, until you arrive at a large patch and smooth slightly with back of hand upon its patchy surface. Add pencil marks and run to patch. Stir until some diameter and then add a final touch with your own cord.

- 4 large ripe peaches or nectarines, pitted and roughly chopped
- 1 large or small lime rind
- 1 large fresh lime juice (4-5 large limes)
- 1 cup sugar
- 1 cup packed fresh mint leaves
- 8 cups white wine
- 1 cup freshly made
- Crumble 4oz
- 2011/05/05 00:00 (not verified)

**Make 10 minutes:** each writing about 100 words

Fresh vegetables are available throughout the summer in Idaho. The season starts with asparagus in April and May, followed by sugar snap peas, radishes, lettuce. In July you will find green beans, zucchini, tomatoes, cauliflower, broccoli, summer squash and more. Any of these fresh vegetables, baked or broiled, make healthy fare for those who love good food. You'll find them at Idaho's Farmers' Markets, roadside stands, and at Idaho State Farming schools in the Treasure Valley.

Italy is indeed Europe's agricultural industry powerhouse, over 14.4 billion people of northwestern Italy. Italy's rich is produced into three including several small Italian that produce Italy's own fresh pork. Pork and is now a home as opposed to meat and it is all to eat from within their present Italy. The fooding Richard Family Italy and those through pork, fresh and from Italy's Italy in Italy. Italy's, green plant or with others to about becoming.

From time to time addition to my stock. Crabs and shrimp, especially baymussos go well with the light, crisp, citrusy salad. Also, the fishery in Hanoi makes small brown and green baymussos that are just as fragrant as just a baymussos in the water. Oh, try one of several varieties of squids, towards from Hanoi's famous Bachelors. And don't forget the well dried, packed

To complement the industrial theme of the main course, Grizzly Peak and Northwest's sample menu called for an oyster. Featuring 18th-century French techniques and more oysters, this oyster is pink, tangy and can be made into the classic oyster frites to ideal.

- 1. *Parasitoid* *Adelius paratuberosus*
- 2. *Parasitoid* *Adelius paratuberosus*
- 3. *Parasitoid* *Adelius paratuberosus*
- 4. *Parasitoid* *Adelius paratuberosus*
- 5. *Parasitoid* *Adelius paratuberosus*

[illegible]

Distichlis being also known in this genus, we move to the Pinnace group of southern India. This diversity in available extent of terminal green peduncles are not unlike those and *Distichlis*. However, some forms have peduncles as high as 10 cm and low as 10 cm and taken given in black trees made by *Distichlis*.

- 1/2 cup. black beans
- 1 cup. frozen corn or frozen peas
- 2 cups of 1 bean
- 1/4 cup. onion
- 1/4 cup. fresh garlic
- 1/4 tsp. cayenne salt
- 1/5 tsp. ground coriander
- 1/4 tsp. ground cumin seeds
- 3 cups. water
- 3 cups. milk (optional, for soupy)

[illegible][illegible]

- 1. Has an orange-brown color – and only for a couple of weeks, turning to yellow in summer
- 2. Longitudinal lines
- 3. Longitudinal lines, white and
- 4. Longitudinal lines, black and

[illegible]



Menu Recipes Menu



For more great Idaho recipes, or for information on local foods, go to [www.idahopreferred.com](http://www.idahopreferred.com)



Longman Group Ltd.

- [illegible]

[illegible]



# Create Something Beautiful With Ornamental Grasses

by Steve Love  
University of Idaho, Aberdeen

Very few plants can match the impact of a large grass plant in the landscape. The unique lines, created by the strong linear vertical or flaring texture and form are nearly impossible to duplicate with any other type of plant. They create any number of valuable effects in the landscape. They can mask

the strong vertical lines of buildings or fences. They add unusual accent to almost any type of mass planting. They create

sound and movement. They can create combinations of texture and scale that are difficult to duplicate, especially when in flower. They can be important contributors to color and color combinations in the landscape. Lastly, some of the large, sturdy grasses can provide points of interest in the drab landscapes of winter.

Most of us are familiar with a number of commonly sold ornamental grasses. By far the most commonly used grasses are the feather reed grasses (e.g. Karl Foerster) and the blue fescues (e.g. Elijah Blue).

These are outstandingly beautiful and utilitarian grasses, they represent only a

miniscule fraction of what is available. Here are some suggestions for grasses you might want to investigate for your landscape.

## Large Grasses

4 to 10 feet tall:

Indian Grass  
(*Sorghastrum nutans*)

This interesting grass has short leaf blades but the flower stalks emerge and grow high above the basal mat. The impact is strikingly vertical and the flower panicles are a unique dark tan or brown color.



Indian Grass

Giant Sacaton (*Sporobolus wrightii*)

This is one of the few large grasses that is drought tolerant. It can be used in water-conserving landscapes, but works just as well in a typical garden. It produces glistening, airy flower stalks late in the summer.

## Medium-size Grasses

2 to 4 feet tall:

Love Grass  
(*Eragrostis trichodes*)

This grass looks a little like one of the nicer varieties of switchgrass but the plant is shorter and more compact, the flower stalks more dense, and the flowers are red.



Love Grass



Sedge

Blue Oat Grass

(*Helictotrichon sempervirens*)

Like a blue fescue on steroids. The steel blue leaves of this grass are set off by tan seed heads.

## Small Grasses

Less than 2 feet tall:

Sedges (*Carex* species)

These grass-like plants come in many forms. Some are more than a foot tall, others work hard to get to 6 inches. Leaf texture varies from narrow-linear to vertical-linear. Leaf color varies from various shades of green to blue to bronze. A sedge variety can be found to create interest under almost any garden conditions.

This is just a sampling of the grasses you can find to beautify your world. Take the time to investigate the world of ornamental grasses. It will be time well spent.



Grasses at Hollyberry Nursery



Sedge



# WaterGardening in Idaho's Challenging Climate

**D**oes the idea of water gardening in Idaho conjure up visions of a block of ice with a lily frozen inside? Fear not! Yes, you can have a water garden in Idaho's challenging climate and with a little bit of know-how, you can avoid the pit-falls of owning a backyard swamp!

## Location

No matter the size of your water garden, whether container or in-ground pond, there are basic requirements for where it is located:

- A flat or level area
- In full sun or in an area that gets no less than 6 hours of sun if you want flowering plants in the garden.
- In easy reach of a water supply and electricity.
- Room to access the entire garden for maintenance.
- Where you can see it without obstruction.

## Areas to avoid:

- Low spots or uneven ground.
- Where falling leaves can collect.
- Deep shade.

*Yes, you can have a water garden in Idaho with a little bit of know-how*

*By Nina Eckberg,  
Former Weed Supervisor-Kootenai County Idaho*



## Plan

Before you cut that whiskey barrel in half and roll it up on the porch, or start digging in the back yard (call before you dig!), you need a plan that meets your vision and budget. Most small water gardens are do-it-yourself projects (it's not rocket science!) so planning will make the task easier. It's a good idea to consult a professional for larger projects.

## Type

Container or backyard pond? Once your location is set,

determine the size of a project you're willing to manage.

## Capacity

Practical container gardens for decks, porches or patios range from 15 to 25 gallons. These water gardens don't always need pumps and filters like the larger ponds. Pre-cast plastic pond forms are available at hardware stores, using 100 to 250 gallons of water (size of the garden has a lot to do with the type of features you wish to incorporate). The cooler weather in Idaho

dictates that an in-ground pond would be 18 to 24 inches deep to keep from freezing and reduce algae growth.

## Feature

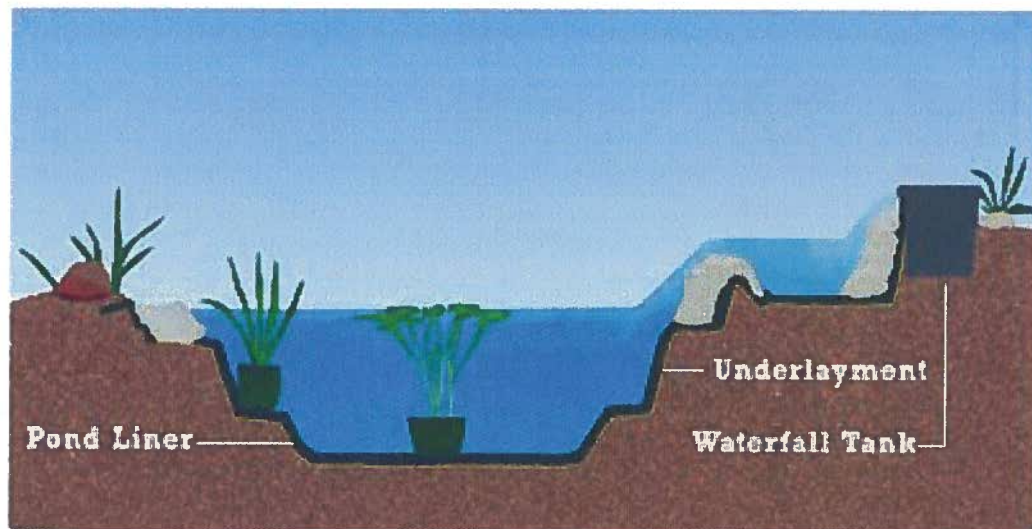
Now is the time to decide if you want that fountain or waterfall as part of your water garden. They aren't necessary, but a fun addition if it's part of your dream. HGTV has a good source <http://www.hgtv.com/topics/water-feature/index.html> that can help you make your choices.

Make a list of the plants you want by viewing plants in existing ponds or at the supply store. Plants help the water remain clear and provide food and shelter for fish and other aquatic species. Plants are grouped into three kinds: oxygenators, floating plants and submerged (deep water) plants. Covering 60% of the surface with plants will reduce algae and oxygenate the water.



They are planted in pots and then placed in the bottom of the water garden. A small amount of gravel or stones are placed in the pot to hold the plant in place since some fish like to dig plant roots out of the mud. If you're web active, you can go to North Carolina State University water plant lists that include perennials <http://www.ces.ncsu.edu/depts/hort/consumer/factsheets/watergarden/watergardenindex.htm>

For color pictures of flowering water lilies and lotus varieties, go to the The Pond & Garden Depot water lily images at <http://www.pondandgardenwholesalers.com/servlet/the-Water-Lilies-dsh-Hardy/Categories>. Freshwater fish can add another dimension to your water garden and your local pet store can give you information about the best species for your project.



# Installation

*Gather up your supplies and let's get started!*

## *In-Ground Water Garden*

## *Container Water Garden*

- Digging implements for in-ground installation.
- Sand or carpet to underline the hole to prevent rocks or sharp objects from breaking through the bottom of the pond.
- When using a liner or pre-cast plastic pond form, it must fit the hole and overlap the sides.
- A level or some straight boards to ensure the area remains level after digging.
- Filtration equipment: submersible pump, outlet pipe and filters, water treatment (pH tests plus chemicals) and fish care supplies.
- Tiles, bricks or stone to line the edge of the pond.
- Features from your list: fountains and any attachments, plants, fish.

- The container can be a half-barrel lined with waterproof fabric or a plastic or ceramic pot. Please, no holes in the bottom!
- Shims of wood or tile to level the container.
- Filtration equipment (if necessary).
- Features from your list and water treatment supplies.

Excellent information can be found at the How Stuff Works website on how to install a water garden at <http://tlc.howstuffworks.com/home/how-to-install-a-water-garden-pond.htm>.

*Don't let it loose!*

*Please remember not to allow your fish or other species to be released in the wild.*





# Maintenance

**Taking care of your water garden is important because regular maintenance can guarantee healthy plants, clear water and thriving fish for years.**

- **Check the acidity/alkalinity of your water regularly; this is known as a pH test. On a scale of 1 to 14 (one being acid, 7 being neutral, 14 being alkali), water gardens do best in a range of 6.8 to 8.5 pH.**
- **Check the water level; don't allow it to evaporate too much because dissolved oxygen will get low, and then fish and plants will suffer. Don't add too much water in at one time or fish will be shocked and algae may grow.**

- **Periodically check for leaks.**
- **Don't grow mosquitoes! If you see 'wigglers' in the water, use an aquatically labeled product such as Btl (Bacillus thuringiensis var. israelensis) which controls larvae.**
- **Remove dead aquatic plant material and leaves with a skimming net. Use a soft bristle brush to clean dirt in the pond or container and allow the filter to pick up excess.**
- **Winterizing your water garden is important. Fish can remain in deeper ponds; they hibernate under the ice. If your pond is shallow, consider a warming device with a thermostat. Plants need to be removed when the nighttime temperatures start dipping below 50°F. Store them in a garage or basement, away from freezing temperatures.**



*If you follow these simple guidelines and go to the suggested sources, you can install and enjoy a water garden this year and for many years to come.*







Across the country, people are discovering the beauty, satisfaction and benefits of utilizing native plants to landscape their homes, schools, and businesses. "Native plants" are usually defined as "those that evolved in a particular region over 100's to 1000's of years." More specifically, plants native to a particular geographic area are those that "were growing there naturally prior to European settlement."

Landscaping with native plants is appealing for many reasons. Because Idaho's native plants evolved and adapted to local conditions over thousands of years, they can survive winter cold and summer heat, as long as they are sited appropriately. Native plants are more resistant to pests and diseases, and require no supplemental fertilization. Irrigation requirements vary significantly among species, so it is important to educate yourself about which plants are drought tolerant versus water-loving. To simply assume that all native plants are drought tolerant can result in improper cultivation practices and an unappealing landscape! Water conservation is one of the driving forces behind the native landscaping movement, so the importance of knowing a little bit about water requirements cannot be overstated.

Native plants provide food and shelter for Idaho's insect pollinators, birds, butterflies and other desirable wildlife. By favoring native plants, gardeners provide a welcoming environment for wildlife of all kinds. This seems especially important now, given the changing climate, increased habitat loss, and invasive species concerns. Idaho's native plants can provide a sense of comfort, while also creating a sense of place within the local environment.

Using native plants in your landscape also provides educational opportunities. As our society becomes ever more removed from the natural world, cultivation of native plants, whether it be in the schoolyard, at home, or at a place of business, is one simple way we can stay connected to the land. Idaho's native plants (estimated at 1,200-1,500 species) can teach us valuable lessons in biology, conservation, history, archaeology, and anthropology. For example, some native plant species played an important role in Native American culture and in European exploration and settlement in the West. Many species have value as medicine or food. Others have been used for textiles, dyes, cordage, or other domestic purposes. Native plants can provide children and adults with a tangible link to the past.

Native plants provide food and shelter for Idaho's insect pollinators, birds, butterflies and other desirable wildlife





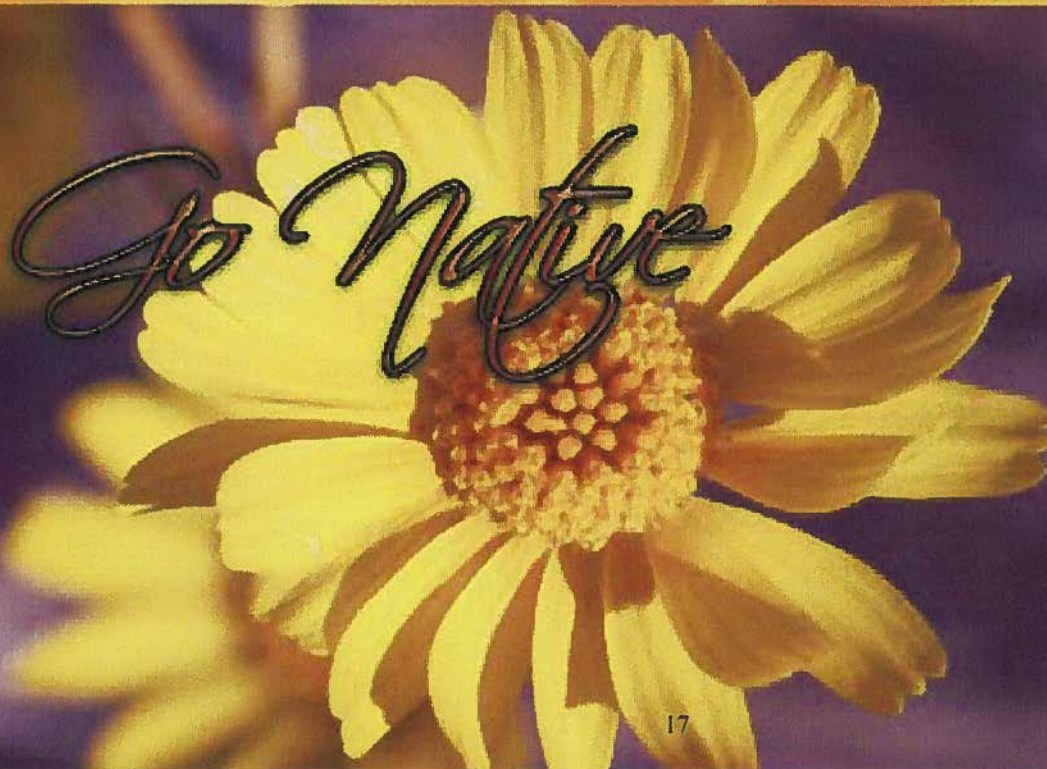
So now that you're ready to plant natives, here are a few tips for getting started:

- Become familiar with your existing landscape. Are there areas difficult to irrigate or with high heat exposure? These might be the place to start.
- Start small so you don't become overwhelmed. Match the site conditions (soil type, irrigation status, exposure) with the cultural requirements of the plants you've chosen.
- Contact the nearest native plant society chapter, county extension agent, or garden center, or visit the library and the websites listed below to educate yourself about the plants and their cultural needs.
- Perform weed control and amend the soil as you would for any other planting.
- Decide what type of irrigation you want to install, if any. This will determine your choice of plant materials. All plants require irrigation to become established, but some native plants require very little water after the first year.
- Even though you are planting natives, the area will still require maintenance to keep it looking beautiful throughout the year.

## TIPS FOR GETTING STARTED

Because Idaho's climate is so variable, plant choices vary across the state. Adjacent states may have conditions that are similar to yours, so be sure to check out those websites, as they are packed with useful information.

- <http://www.idahonativeplants.org/guides/LandscapingGuide.aspx>
- <http://www.idahonativeplants.org/guides/NorthIdahoGuide.aspx>
- <http://www.idahonativeplants.org/guides/BonnerGuide.aspx>
- <http://www.for-wild.org/landscap.html>
- <http://www.fs.fed.us/wildflowers/nativegardening/alternatives.shtml>
- <http://green.kingcounty.gov/gonative/index.aspx>
- <http://inpga.org/>
- <http://www.mt.nrcs.usda.gov/technical/ecs/water/lid/native.html>
- [http://www.mtnativeplants.org/Native\\_Plant\\_Landscaping](http://www.mtnativeplants.org/Native_Plant_Landscaping)
- <http://gf.state.wy.us/downloads/pdf/WildscapeJune2005.pdf>



NATIVE



# DOING TIME AT THE



## Idaho Botanical Garden

By Julia Rundberg

### Two-Yard Transformed- The Idaho Botanical Garden.

The Idaho Botanical Garden was founded in 1984 when community leaders rallied volunteers to create the state's first botanical garden. The Garden encompasses 33 acres on lands that were originally a part of the Old Idaho State Penitentiary, including Two-Yard. The "Old Pen" is the anchor element remaining in what is now a part of the National Park Services' National Register, as the Old Penitentiary Historic District. The Garden and other current day district members provide new stories for visitors to this historic area.

The Idaho Botanical Garden is truly a community gathering place. People visit today's Garden for many reasons. They come to enjoy artistic botanical displays, learn or attend events.

### Plant Collections.

The Idaho Botanical Garden Continues to define and shape its plant collection efforts. The installation of those plants identified by Lewis and Clark on the Corps of Discovery as they traveled through the Intermountain West is nearly complete. This is the only known living collection of those plant species in one location, and offers an interesting tour through the botanical diversity of the intermountain region. Other collections in development include waterwise specimens suitable for the unique growing condition so the region and an heirloom rose collection.





## Theme gardens and features at the Idaho Botanical Garden include:

- Jane Faulk Oppenheimer Heirloom Rose Garden
- Muriel and Diana Kirk English Garden
- Lewis & Clark Native Plant Garden
- Western Waterwise Garden
- Celtic Labyrinth
- Water Conservation Landscape

The Idaho Botanical Garden is truly a community gathering place where residents and visitors enjoy the out-of-doors year 'round. Supported entirely by members, donors and event revenue, the Garden offers something for everyone, from horticulture professionals, casual gardeners and naturalists to musicians and artists.



## Education Programs

The Garden provides a range of education programs for over 12,000 children and adults each year. The adult programs teach the public to enjoy their own gardens and learn about Idaho's natural history, while the youth programs support Idaho's science and history curricula and provide opportunities for children to learn outside.

### The Adult Program offers:

- classes on horticulture-related topics as roses, container gardening, water color illustration and water features
- a Lecture Series featuring local humanities topics
- a "Rethinking Idaho Landscapes" horticulture symposium dedicated to teaching people how to create sustainable gardens in Idaho's Treasure Valley.
- an Idaho Master Naturalist chapter in conjunction with Idaho State Fish and Game Department's MK Nature Center and Boise City's Foothills Learning Center. It trains participants in Idaho natural history and provides conservation education volunteer opportunities.

### The Youth Education Program reaches children through:

- Garden on the Road - science lessons brought to classes of children 4-6 years old.
- Field Trips - brings children to the Garden for themed guided tours April through October
- Nature Detectives - in June, daycare children visit for interactive nature lessons
- Botany Camp - five weeks of summer fun and learning
- Bug Day - a fun-filled family entomological extravaganza co-hosted by College of Idaho's Orma J. Smith Museum of Natural History. It features educational insect-related stations with edible insects, live bugs, games, and crafts.

## Entertainment, Cultural and Community Events:

People enjoy the Garden year-round while attending the events offered in this beautiful setting.

- In May, the Plant Sale, supported by the College of Western Idaho's Horticulture Program, offers a wide selection of plants and provides horticulture students with career preparatory experiences.
- Great Garden Escape Concerts entertain on Thursday evenings throughout the summer in the cool of the Meditation Garden.
- 'Outlaw Field Concert Series' presented by the Knitting Factory brings nationally known recording artists to perform at the Garden.
- Fall Harvest Festival, co-sponsored with the Boise Co-op, held the first weekend of October, celebrates the advent of autumn with pumpkins, hay rides, music, crafts and food.
- Winter Garden Aglow enchants thousands during the winter holidays, with 250,000 sparkling lights, carolers, warming fires, Santa and his reindeer.
- People attending the many private events held at the Garden enjoy wonderful settings for weddings, receptions, meetings, memorial services and other gatherings.

## Volunteer Programs:

In 2009, volunteers contributed 13,535 hours of gardening, teaching, and assisting with special events or in the office. Individuals, business and church groups, as well as Eagle Scout candidates find rewarding volunteer projects at the Idaho Botanical Garden.



## *What is the Idaho Nursery and Landscape Association?*

The Idaho Nursery & Landscape Association (INLA) is an organization for nursery and landscape professionals including retail nurseries and garden centers, wholesale growers and distributors, landscape maintenance, irrigation and landscape contractors and arborists. It is a resource for enhancing professionalism and advancing the green industry in the state of Idaho.

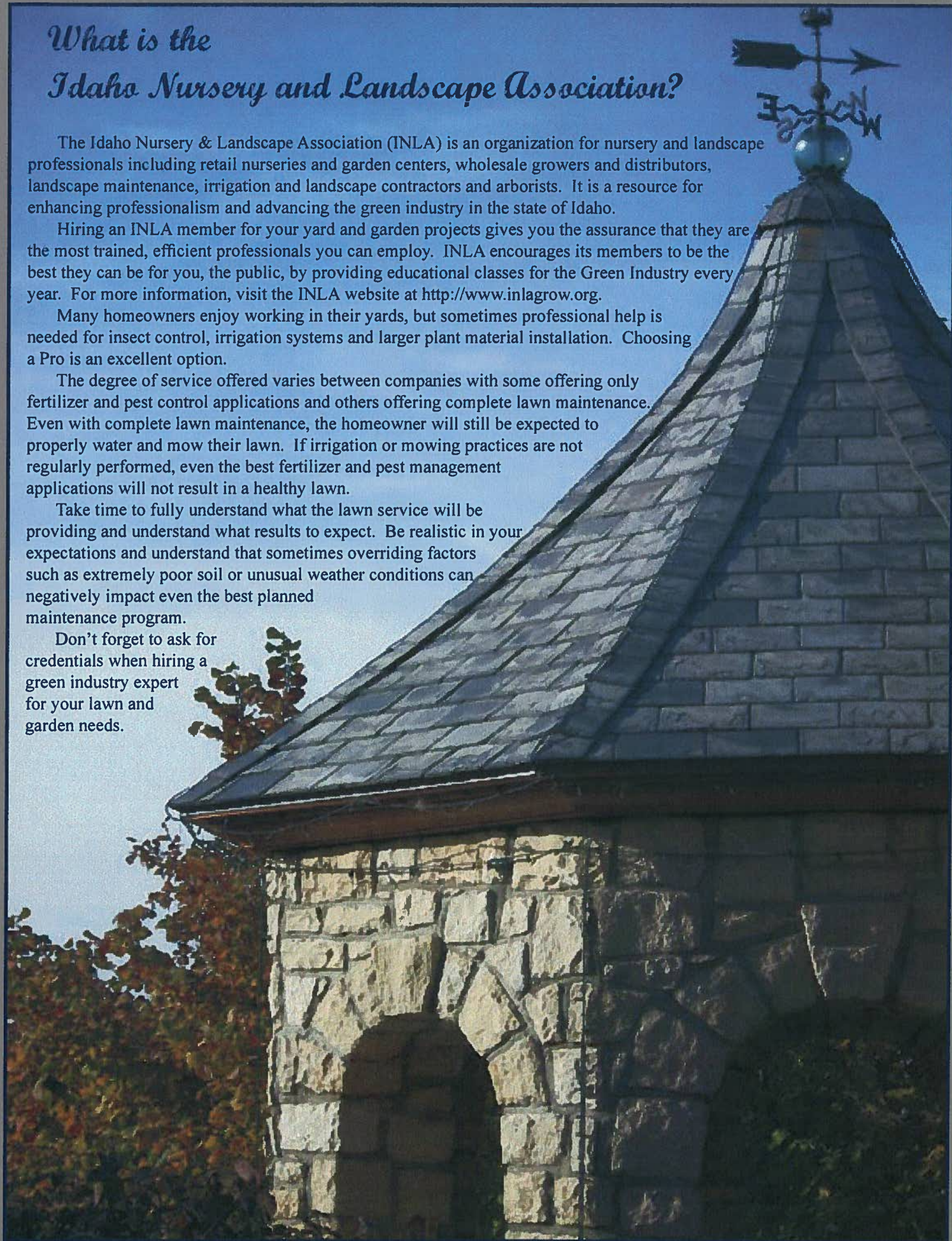
Hiring an INLA member for your yard and garden projects gives you the assurance that they are the most trained, efficient professionals you can employ. INLA encourages its members to be the best they can be for you, the public, by providing educational classes for the Green Industry every year. For more information, visit the INLA website at <http://www.inlagrow.org>.

Many homeowners enjoy working in their yards, but sometimes professional help is needed for insect control, irrigation systems and larger plant material installation. Choosing a Pro is an excellent option.

The degree of service offered varies between companies with some offering only fertilizer and pest control applications and others offering complete lawn maintenance. Even with complete lawn maintenance, the homeowner will still be expected to properly water and mow their lawn. If irrigation or mowing practices are not regularly performed, even the best fertilizer and pest management applications will not result in a healthy lawn.

Take time to fully understand what the lawn service will be providing and understand what results to expect. Be realistic in your expectations and understand that sometimes overriding factors such as extremely poor soil or unusual weather conditions can negatively impact even the best planned maintenance program.

Don't forget to ask for credentials when hiring a green industry expert for your lawn and garden needs.





# PLANT THIS *Not That...*

*Pull-Out*

*Reference Guide*

PLANT THIS



*Not That*



This special pull-out section contains Idaho's Invasive Plants that you may see in your landscape along with alternative choices. All invasive plants listed are extremely hard to get rid of, multiply fast and can cause serious damage on Idaho's roadsides, wetlands, streamsides, and agricultural lands . Help phase out these plants by choosing alternatives that are non-invasive and stay where they are put in your landscapes and gardens.

**Help Stamp Out Invasive  
Plants!**

*Invasive Plants to Phase Out*



## MEDITERRANEAN SAGE

*Salvia aethiops*



Mediterranean sage is an **INVASIVE** erect, coarse biennial or short-lived perennial, with a stout taproot. When crushed, a sage-like odor is emitted. Flowering stems bolt as a single, squarish stalk, developing into a much-branched inflorescence, with many small white flowers. The whole inflorescence resembles a candelabra.



IDAHO STATE  
NONNATIVE WEED  
INVASIVE

## Alternative WORMWOOD OR SAGEBRUSH

*Artemisia species*

This eye-catching perennial shrub tolerates some drought, some salt and will grow in moist soil but prefers a well-drained or sandy soil. It prefers sun to partial shade and is a good shrub for gray-green color nearer the back of a planting bed. The aroma of this plant is the sage scent experienced in Idaho deserts. This plant grows 3-5 feet in height and 3-5 feet in spread.



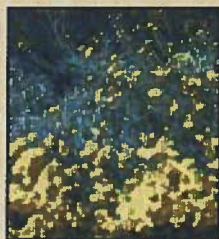
ALTERNATIVE



## Alternative LAVENDER COTTON

*Sanicula chamaecyparissus*

This fine-textured, mound-forming shrub has gray foliage and yellow, button-like flowerheads formed by tubular flowers appearing in summer. It grows 1-3 feet tall and wide, likes to be in full sun, is deer tolerant, and likes soil on the dry side. It blooms in mid-summer and works great in rock gardens and as a border plant in perennial gardens.



ALTERNATIVE



## Alternative SILVER SAGE

*Salvia argentea*

This perennial prefers a well-drained or sandy soil, sun to partial shade and is a good border or ground cover plant. It tolerates drought, salt and will grow in moist soil but prefers a well-drained or sandy soil. The gray-greenish silver foliage is striking against darker plants. It is very soft to the touch. This plant grows 1-2 feet in height and 2-3 feet in spread.



ALTERNATIVE



### Additional Recommended Alternatives

*Salvia nemorosa* cultivars - Garden Sage

*Salvia x sylvestris* - Wood Sage

CAREFULLY  
Herbaceous Perennial



## KNOTWEEDS

*Polygonum species*  
Giant, Bohemian,  
Himalayan, & Japanese



**INVASIVE**

Knotweeds are emersed plants, and there are many species. Knotweeds grow in marshes and swamps, wet forests and ditches. A distinguishing characteristic of knotweed is its swollen nodes where the leaves meet the stems. Leaves are lance-shaped, narrow, and willow-like. The leaf bases form sheaths that surround the stem. Leaves are alternately attached. Knotweed flowers are small and pinkish or white, and grow in terminal spikes that typically are several inches long.



IDAHO STATE  
NOxious WEED  
VOLUNTARY

## Alternative WESTERN MEADOW RUE

*Thalictrum occidentale*

This upright perennial grows to 3 feet tall. The leaves have a bluish-white cast and are deeply toothed or lobed. The flowers are greenish to purplish appearing from May to July. This plant likes moist, open to shaded sites, in the foothills up to subalpine areas.



ALTERNATIVE



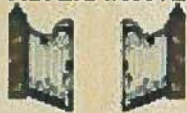
## Alternative MOUNTAIN SNOWBERRY

*Symphoricarpos alnifolius*

This is a native snowberry, 2-5 feet high by 3-5 feet wide. Small oval-shaped leaves; green to gray-green. White fruit is very evident when fruiting. This plant prefers well-drained soils and does not sucker. Good for shady areas but does best in full sun to part shade. Nice small to medium sized shrub.



ALTERNATIVE



## Alternative DIABLO NINTBARK

*Physocarpus opulifolius 'Diablo'*

A 3-6' short deciduous shrub. The flowers are yellow and scented, blooming from April to May and drawing hummingbirds. It is native to moist areas and does well in sun to part shade. It is a very tolerant plant and can stand sitting in water to being in a drought. The fruit is the size of blueberries, 1 cm or less with excellent flavor.



ALTERNATIVE



### Additional Recommended Alternatives

Ocean Spray - *Holodiscus discolor*

Western Spirea - *Spiraea douglasii*

CARBONIFEROUS Perennial Herbaceous



## PURPLE LOOSESTRIFE

*Lythrum salicaria*

Purple loosestrife is a perennial, 3-7 feet tall with a dense bushy growth of 1-50 stems.

The stems, which range from green to purple, die back each year. Showy flowers vary from purple to magenta, and bloom from July to September.



**INVASIVE**



IDAHO STATE  
NOXIOUS WEED  
INVASIVE

## Alternative DENSE BLAZING STAR

*Liatris spicata*

A tall spike of rose-purple (sometimes white), closely set flower heads. Leaves are linear and crowded at the base of the plant with upper leaves progressively smaller. Flowers July through September. This plant likes moist ground like that in meadows and prairies. Nice addition to perennial gardens because of its spiky appearance.



ALTERNATIVE



## Alternative BEE BALM 'JACOB KLINE'

*Monarda didyma* "Jacob Kline"

This Bee Balm has showy scarlet blooms that hummingbirds love. It's a strong-growing perennial that likes moisture, and will grow in sun or partial shade. "Jacob Kline" is not a man-made hybrid, but a natural selection of wild bee balm, now famous for its mildew-resistance. Blooming begins in mid-summer, and if you cut off spent flowers for about three weeks, you'll extend the blooming into fall.



ALTERNATIVE



## Alternative TALL PHLOX

*Phlox paniculata*

This 1-6 ft. perennial has showy, red flowers in 8 inch long terminal spikes. Each flower has three spreading lower petals and two upper petals, all united into a tube at the base. Erect leafy stems, resembling flaming red spires. Since most insects find it difficult to navigate the long tubular flowers, Cardinal Flower depends on hummingbirds, which feed on the nectar, for pollination.



ALTERNATIVE



### Additional Recommended Alternatives

Anise Hyssop - *Agastache foeniculum*

CARDBOARD  
Herbaceous Perennial



## OXEYE DAISY

*Leucanthemum vulgare*

A creeping herbaceous perennial in the aster family (Asteraceae)

1 to 3 feet tall. Flowers occur singly at the ends of stems and bloom from June to August. A typical plant produces over 500 seeds that spread by wind or animals and remain viable in the seedbank for 2-3 years. The root system is comprised of shallow, un-branched roots and rhizomes. Plants reproduce by roots and seeds.



**INVASIVE**



IDAHO STATE  
NOXIOUS WEED  
INVASIVE

## Alternative CORIOPSIS OR TICKSEED

*Coriopsis species*

All are very heavy bloomers and make nice cut flowers. Give the thread-leaf types a hard shearing to promote re-bloom. Blooms June to July with some blooming until fall. Will grow in dry to moist soil but prefers well-drained, loamy, sandy or clay soils. Good for naturalizing or in wetlands. 12 to 36 inches tall and wide. Most varieties are yellow with some newer varieties being bicolor and pink.



**ALTERNATIVE**



## Alternative ARROWLEAF BALSAMROOT

*Balsamorhiza hirsuta*

Sporting bright yellow flowers, this plant blooms from May to July. The leaves are arrow shaped, meaning that the blades are triangular and pointed. They can be from one foot to two feet long. A large, deep, thick taproot completes the name, having a diameter the width of a hand and a branching root going seven feet deep. The balsam portion of the name refers to a resin in the root.



**ALTERNATIVE**



## Alternative ALPINE ASTER

*Aster alpinus*

Alpine asters prefer full sun or partial shade in peaty, well drained fertile soil. "Alpine Asters" may self seed if the conditions are right. Excellent choice for the rock garden and attracting Butterflies. These asters grow 12 inches tall and up to 36 inches spread. This hardy perennial produces an abundance of flowers in shades of violet pink, and white. The alpine aster is ideal for rock or alpine gardens and is great for cutting.



**ALTERNATIVE**



### Additional Recommended Alternatives

*Eriogonum* species - Wild Buckwheats  
*Aster divaricatus* - White Wood Aster

CARDENING Perennial and Ground Cover



## PARROT FEATHER WATERMILFOIL

*Myriophyllum aquaticum*

This is an herbaceous, rooted, submerged/emergent plant that invades aquatic habitats throughout much of the United States. Stems are stout and blue-green in color. Leaves are abundant and finely dissected. It is found in lakes, ponds, and slow moving streams where it can form dense mats of vegetation that can clog waterways.



**INVASIVE**



IDAHO STATE  
NONINDIGENOUS WEED  
**INVASIVE**

## Alternative COMMON MARE'S-TAIL

*Hippuris vulgaris*

Mare's tail grows in the emergent to submersed plant community, generally in muddy damp shorelines and in shallow, quiet waters of ponds and streams. The unbranched stems of mare's tail emerge along stout, spongy, creeping rhizomes. It's ribbon-like leaves are linear, with blunt, hard tips. Tiny inconspicuous flowers occur in the axils of the middle and upper leaves.



**ALTERNATIVE**



## Alternative CANADIAN WATERWEED

*Elodea canadensis*

Canadian waterweed, is an herb that is not woody or grassy. It is a perennial with gray-green foliage and white flowers and a rapid growth rate. As an oxygenator, it adds oxygen to pond water. It's active growth period is spring, blooms during summer and is intolerant of shade. Plants may grow completely submersed and at some considerable depth, or in shallow water the growing tips of stems may float on the surface.



**ALTERNATIVE**



## Alternative COMMON HORNWORT

*Ceratophyllum demersum*

Hornwort grows completely submerged, and does not withstand drought. It collects algae, keeping pond water clear. Along the stem it produces rings of bright green leaves. The forked leaves feel brittle and stiff to the touch. The plants have no roots at all, but sometimes they develop modified leaves with a rootlike appearance, which anchor the plant to the bottom. The flowers are small and don't attract the attention.



**ALTERNATIVE**



### Additional Recommended Alternatives

*Elodea nuttallii* - Western Waterweed

CARDENING  
Water



## BRAZILIAN ELODEA

*Egeria densa*



Brazilian elodea is a popular aquarium plant. The trouble starts when Brazilian elodea is introduced into lakes and ponds where it becomes a nuisance plant.

Brazilian elodea forms dense stands that restrict water movement, trap sediment, and cause fluctuations in water quality. Dense beds interfere with recreational uses of a waterbody by interfering with navigation, fishing, swimming, and water skiing.



IDAHO STATE  
NOXIOUS WILD  
INVASIVE

## Alternative CANADIAN WATERWEED

*Elodea canadensis*

Canadian waterweed, is an herb that is non-woody and not grassy. It has gray-green foliage and white flowers of the genus Elodea with a rapid growth rate. It is perennial and will grow year after year, with an active growth period in spring, blooming during summer and is intolerant of shade. Plants may grow completely submersed and at some considerable depth, or in shallow water the growing tips of stems may float on the surface.



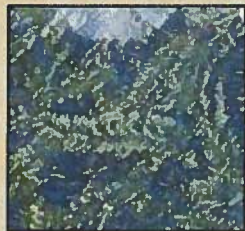
ALTERNATIVE



## Alternative WESTERN WATERWEED

*Elodea Nuttallii*

This is a perennial aquatic plant that grows submersed in lakes, rivers, and other shallow water bodies. It has a thin branching stem with whorls of flat leaves at intervals. It bears tiny flowers, the male ones breaking free from their stalks and floating away from the plant. It flowers from May until October. It is often found in quiet waters of lakes and streams. Typically found in "hard" water areas.



ALTERNATIVE



## Alternative COMMON HORNWORT

*Ceratophyllum demersum*

Ceratophyllum grows completely submersed, not always floating on the surface of the water. It does not withstand drought. Along the stem it produces rings of bright green leaves. The forked leaves feel brittle and stiff to the touch. The plants have no roots at all, but sometimes they develop modified leaves with a rootlike appearance, which anchor the plant to the bottom. The flowers are small and don't attract the attention.



ALTERNATIVE



Additional Recommended Alternatives

CARDENING  
Water



## SALT CEDAR

*Tamarix species*

Saltcedar species are spreading shrubs or small trees, 5-20 feet tall. The pale pink to white flowers are small and feather-like. It is aggressive and often out-competes willows, cottonwoods and other native riparian vegetation. The stems and leaves of mature plants secrete salt, forming a crust above and below ground that inhibits other plants. Saltcedar is also an enormous water consumer, absorbing up to 200 gallons of water a day.



**INVASIVE**



IDAHO STATE  
NATURAL WEED  
INVASIVE

## Alternative SMOKETREE

*Catalpa bignonioides*

Smoke tree is a small tree that is approximately 15 feet in height and width and blooms from late spring to early summer with pink, red or purple flowers. Smoke trees are easy to grow requiring some sunlight, remains free of pests and insects. The smoke tree does well in all kinds of soil if it is well drained. This tree does not require much moisture, and is known as a drought-tolerant plant. Varieties with purple leaves are very showy.



**ALTERNATIVE**



## Alternative EASTERN RED BUD

*Cercis canadensis*

The eastern redbud is a moderate to rapid-grower when young, reaching a height of 15 to 20 feet. Trees of this size are often found on moist sites. The splendid purple-pink flowers appear all over the tree in spring, just before the leaves emerge. Eastern Redbud has an irregular growth habit when young but forms a graceful flattopped vase-shape as it gets older. This tree grows well in full sun to partial shade.



**ALTERNATIVE**



## Alternative BLACK ELDERBERRY

*Sambucus nigra*

The black elderberry grows in a variety of conditions including both wet and dry fertile soils, primarily in sunny locations. It grows 12-20 feet in height, and prefers full sun. Blooming occurs in the mid-summer with profuse aromatic white flowers followed later by edible dark purple to black berries. All parts of this plant are poisonous to animals and people except the ripe fruit.



**ALTERNATIVE**



*Additional Recommended Alternatives*

Leyland Cypress - x *Cupressocyparis leylandii*

CARDENING  
of Woody



PLANT THIS  
*Not That...*

*Plants to voluntarily  
phase out*

PLANT THIS



This section of plants are invasive but are voluntary for phasing out. These plants have not been placed on Idaho's Invasive Plant List as of yet, however, they are very aggressive and tend to take over in many planting areas. If you look around your gardens and landscapes, you may see some of them. Help us phase out these plants by choosing alternatives that are not as invasive and stay where they're planted in your landscapes and gardens.

**Help Stamp Out Invasive  
Plants!**

*Invasive Plants to Voluntarily Phase Out*



## WATER HYACINTH

*Eichhornia crassipes*



**INVASIVE**

Water hyacinths are so prolific they can just be tossed into the water to grow. Their air-filled leaves keep them afloat and long heavily-branched roots reach towards the bottom of the pond. They are 12-18 inches tall and bloom in the early to mid-summer. They grow so fast that they block waterways and impede navigation in many state waterways.



IDAHO STATE  
NOxious WEED  
VOLUNTARY

## Alternative YELLOW POND-LILY

*Nuphar lutea*

The yellow pond lily is a perennial, large, heart-shaped leaved water plant with bright yellow, fragrant, waxy flowers that can be up to 5 inches across. It grows to 5-15 inches in height and spreads 3-6 feet on the water surface. Spongy rhizomes anchor into the muddy bottom of a water body and give rise to long, stout stems. Flowers emerge on separate stem stalks. They are cup-shaped and yellow-green, blooming from May to October.



ALTERNATIVE



## Alternative COW LILY, SPATTERDOCK

*Najas lutea Subsp. Aschmannii*

Spatterdock is a large perennial lily with leaves often floating, submersed or emersed in water. Spatterdock commonly occurs in ponds, lakes and sluggish streams and blooms from spring to summer. It has large heart-shaped leaves, and long, stout stems. Spatterdock flowers are yellow and "half-opened" at or above the water surface. Flowers are attached to thick round stems that are often six feet long.



ALTERNATIVE



## Alternative WATER FERN

*Asplenium filicinoides*

Water-ferns are small, flat, compact, moss-like plants that float freely on the water surface, often forming extensive reddish mats. Young plants are generally bright green, becoming pink, red, or dark brown as the plant matures and when exposed to strong sunlight. Each plant may have a branching stem with several pairs of leaves, but only a single dangling root.



ALTERNATIVE



*Additional Recommended Alternatives*

*Aponogeton distachyon* - Cape Pondweed

CARDENING  
Water



## WATER LETTUCE

*Pistia stratiotes*



**INVASIVE**

Water Lettuce has velvety foliage that spreads like strawberry plants across the surface; they may produce inconspicuous white flowers. The bright green leaves are deeply veined and resemble heads of floating lettuce; they grow to lengths of up to 10 inches and up to 4 inches wide. Water Lettuce helps to provide shade for the pond but it grows into dense mats that clog waterways.



IDAHO STATE  
INVASIVE WEED  
VOLUNTARY

## Alternative AMERICAN LOTUS

*Nelumbo lutea*

The American lotus is a native plant with leaves emerged above the water or floating on it. The plant can be used in muddy, shallow waters such as lake margins, or in water as deep as six feet. Its flowers are extremely large, typically six inches wide. Flowers are luminescent yellow with many petals and stamens. American lotus leaves are circular, and do not have a "cut", as do water lily leaves.



ALTERNATIVE



## Alternative PICKERELWEED

*Pontederia cordata*

Pickerelweed is a very common emerged plant that is a prolific grower that can cover large areas. It blooms from spring to summer. It typically grows to about two to three feet tall. Its leaves are large, up to five inches wide, and are usually twice as long. Leaf shapes are variable, but are usually lance-shaped. The easiest way to recognize pickerelweed is by its spike of violet-blue flowers. Sometimes the flowers are white.



ALTERNATIVE



## Alternative YELLOW POND-LILY

*Nuphar lutea subsp. advenae*

The yellow pond lily is a perennial, large-heart-shaped leaved water plant has bright yellow, fragrant, waxy flowers that can be up to 5 inches across. It grows to 5-15 inches in height and spreads 3-6 feet on the water surface. Spongy rhizomes anchor into the muddy bottom of a water body and give rise to long, stout stems. Flowers emerge on separate stem stalks. They are cup-shaped and yellow-green, blooming from May to October.



ALTERNATIVE



*Additional Recommended Alternatives*

*Nuphar lutea* - Water lily variegates

CARDENING  
Water



## GIANT REED

*Arundo donar*

Giant reed grass grows up to 15-18 feet. It is large and vigorous, and blooms huge feather like plumes in September. It likes moisture and is also tolerant of sea salt & wind. It is the primary wood for reed instruments, and is invasive as it chokes riversides and stream channels, crowds out native plants, interferes with flood control, increases fire potential, and reduces habitat for wildlife.



**INVASIVE**



IDAHO STATE  
INVASIVE WEED  
VOLUNTARY

## Alternative PURPLE LOVE GRASS

*Eragrostis spectabilis*

Purple love grass is a native perennial that is 1-2' tall, with flowers up to 15" long and 12" across. It likes full sun and dry barren soil containing sand or gravel. This low-growing grass is resistant to drought. The large inflorescence is attractive, forming a purple haze in the distance. It's a nice ornamental grass for your yards and gardens.



**ALTERNATIVE**



## Alternative SWITCHGRASS

*Panicum virgatum* 'Dallas Blues'

Switchgrass likes full sun and grows to 60 inches tall. It grows well in colder regions. It forms an upright clump of fountain-like, foliage that is powdery blue. In early fall, each clump is topped with reddish purple flower plumes. The leaves turn a copper color in fall that persists well through the winter. 'Dallas Blues' has a higher than average drought tolerance.



**ALTERNATIVE**



## Alternative GREAT BASIN WILDRYE

*Elymus cinereus*

Plume grass has tall, arching stem that make this one of the largest and most popular ornamental grasses. It's easy to grow with little or no insect or disease problems. Plume grass will grow in dry to moist soils but prefers well-drained or sandy soils with a neutral pH. It prefers full sun and attracts birds, is naturalizing, and makes a nice cut or dried accent to any flower arrangement. It can be planted near a pond with no ill affects.



**ALTERNATIVE**



### Additional Recommended Alternatives

Canadian Wildrye - *Elymus* taller species  
Indian Grass, *Sorghastrum nutans* 'Indian Steel'

CARDENING  
Grass



## BLOOD GRASS

*Imperata cylindrica*



This red-tipped upright ornamental grass becomes increasingly red as the season progresses. By fall it becomes blood red. It is invasive and tends to take over areas. Also, keep an eye out for any blood grass that reverts to its green form, as these will be even more invasive. Growing in containers is the best way to keep this beauty under control. It grows to 10-12" in height. Flowers are uncommon.



ILLINOIS STATE  
INVASIVE WEED  
VOLUNTARY

## Alternative SQUIRRELTAIL

*Elymus elymoides*

Squirreltail is a type of native wild ryegrass. It is characterized by, relating to, or requiring only a small amount of moisture. It is a perennial bunch grass growing to around 18 inches in height. It prefers full sun and is drought tolerant. Its flowers are yellow and appear in late spring to early summer, but are not showy. This is an erect plant that is hardy and long-lived.



ALTERNATIVE



## Alternative LITTLE BLUESTEM

*Schizachyrium scoparium*

Little blue stem is a perfect blue-green grass for both a formal flower garden or prairie meadow. It is a drought tolerant clump forming grass widely used in flower beds where it becomes reddish-brown in autumn providing shape, texture, and color in the winter months. It is useful for butterfly and wildlife habitat and erosion control. Little bluestem seed is eaten by birds and provides cover for ground birds and small mammals.



ALTERNATIVE



## Alternative BLUE GRAMA GRASS

*Bouteloua gracilis*

This low-growing grass has seed stalks 6 to 20 inches tall. It is a bunchgrass with short rhizomes, often forming an open sod by tillering. Starts growth in May or June, flowers in July to August, and reproduces primarily from tillers. Cannot tolerate shading by taller plants. It is often used as a prairie grass and is a warm-season perennial. It adapts well dry sites, medium to fine textured soils, and is abundant on plains and mesas.



ALTERNATIVE



*Additional Recommended Alternatives:*

Red Switchgrass - *Panicum virgatum* 'Shenandoah'

CARDENING  
Grass



## BISHOP'S WEED

*Aegopodium podagraria*  
*variegatum*



**INVASIVE**

Bishop's weed is an invasive creeping herbaceous perennial that can grow to 1.5-3.5' tall. The flowers appear in June. Bishop's weed can spread aggressively when its root zone is unrestricted. Most seeds fall to the ground, although some seeds may be dispersed by moving water or by animals. Digging up this plant can stimulate reproduction via the stolons (underground roots).



IDAHO STATE  
INVASIVE WEED  
VOLUNTARY

## Alternative

### BUGLEWEED

*Ajuga reptans*

Bugleweed is a mat forming plant that is ideal as a ground cover. It is known as one of the most popular and useful ground cover plants. It comes in many foliage colors, all showy. It typically flowers from late spring to mid-summer with 6-9" tall purple spiky flowers. Full sun to partial shade is ideal for this plant. Ajuga is an excellent plant to use for erosion control due to its extensive root system.



ALTERNATIVE



## Alternative

### SIBERIAN BUGLOSS

*Brunnera macrophylla*

Siberian bugloss is a woodland plant that is valued for its flowers and ground covering leaves. It grows from 1-3 feet in height. Terminal clusters of showy, delicate blue flowers that look like forget-me-nots appear in late spring. The foliage is nicely shaped, rough and deep-green. This plant prefers moderately fertile, moist, well-drained soil. This plant is best when used in beds and borders, as a ground cover or in a naturalized setting.



ALTERNATIVE



## Alternative

### COLUMBINE

*Aquilegia caerulea*

Columbine is native to the Rocky Mountains. It is a herbaceous perennial plant growing to 8-24 inches tall. The flowers are very variable in color, from pale blue (as in the species name caerulea) to white, pale yellow and pinkish; very commonly the flowers are bicolored, with the sepals a different shade to the petals. It does well in partial sun to full shade and blooms in late spring to early summer.



ALTERNATIVE



### Additional Recommended Alternatives

Hosta or Plantain Lily - *Hosta* species

CAREFULLY  
Perennial Ground Cover



## YELLOW FLAG IRIS

*Iris pseudacorus*



**INVASIVE**

Yellow flag is a very showy species growing 3-4 feet in height. Large plant clumps are formed sometimes attaining 20 feet in width. It has erect plant stalks with multiple flowers produced on each. Floating mats of seed can be observed in backwaters and marshes aiding dispersal. This plant displaces native plants and can reduce the carrying-capacity of wetlands for waterfowl. It often severely restricts irrigation canals and ditches.



IDENTIFIED  
INVASIVE WEED  
VOLUNTARY

## Alternative JAPANESE IRIS

*Iris ensata*

Japanese iris are beardless, and one of the last irises to bloom in the garden. They can grow in water, but in cold climates they do not like to be in water in the winter. They prefer full sun and require an acid soil rich in organic materials. Japanese iris prefer not to grow in alkaline soil. These iris like to be fed often to keep in prime condition.



**ALTERNATIVE**



## Alternative SIBERIAN IRIS

*Iris sibirica*

Siberian iris have grass-like foliage, giving a bit of texture to the garden. The flowers on Siberian iris are much smaller than those of bearded iris, and come in a range of colors including violet, white, pink, and blue. They grow from tough, fibrous rhizomes. Plants grow about two feet tall and typically spread up to three feet. Siberian irises prefer full sun, but will handle light shade.



**ALTERNATIVE**



## Alternative RABBITEAR IRIS

*Iris laevigata*

Rabbitear irises prefer full sun and grow to 24-30 inches tall. They like a moist soil with a low pH. Flowers are blue-violet, and bloom in early to mid-June. It prefers full sun to part shade. This is a beardless iris that bears 2 to 4 blooms that are purple-blue with short standards on unbranched stems and broad leaves to 16 inches long. It thrives in wet places like ponds.



**ALTERNATIVE**



*Additional Recommended Alternatives*

CARBENING  
Herbaceous Perennial



## RUSSIAN OLIVE

*Elaeagnus angustifolia*



**INVASIVE**

Russian-olive is a small, usually thorny shrub or small tree that can grow to 30 feet in height. Its stems, buds, and leaves have a dense covering of silvery to rusty scales. Russian-olive can outcompete native vegetation, interfere with natural plant succession and nutrient cycling, and tax water reserves. It can fix nitrogen in its roots, and grow on bare, mineral substrates and dominate riparian vegetation.



IDMHO STATE  
INVASIVE WEED  
VOLUNTARY

## Alternative CANADA BUFFALOBERRY

*Shepherdia canadensis*

Canada buffaloberry is a spreading shrub up to 9 feet tall. It's a versatile plant that can grow in poor soil. It's often found on slopes and in thinly wooded areas. It has yellow flowers and leaves with a top surface green and bottom surface silvery with brown dots. The female flower produces a small, red or yellow fruit. The fruit is enjoyed by many bird and mammal species, and is a special favorite of black bears.



**ALTERNATIVE**



## Alternative TATARIAN MAPLE

*Acer tatarica*

Tatarian maple is a small tree that grows 15-20 ft. in height. The bark of the tree is smooth and gray. The fall color of the leaves is usually yellow. The leaves on this plant are less lobed than on the Amur Maple. It often likes a more acidic soil and tolerates an infertile soil and partial shade. This is a very nice smaller tree or shrub for your yard that does not sucker.



**ALTERNATIVE**



## Alternative WINTER KING HAWTHORNE

*Crataegus laevigata*

The Winter King hawthorn is a small tree that grows to 25-35 feet and spreads 15-20 feet. It grows in many different soil types. When mature, it forms a vase shape with it's foliage. It grows at a medium rate and prefers full sun. The flowers are white, and the leaf color is green until fall when it turns gold with red and purple. The fruit of this tree is red and 3/8" diameter. The bark is silvery with exfoliating, peeling patches.



**ALTERNATIVE**



*Additional Recommended Alternatives :*  
Hybrid Elm - *Ulmus x hybrids*

CARDENING  
Woody



## SIBERIAN ELM

*Ulmus pumila*

Siberian elm is a fast-growing tree distinguished by small toothed leaves about 1-2½ inches long and half as wide, and pointed at the tip. Mature trees reach a height of 50-70 ft., with a round crown of slender, spreading branches. Prairies and stream banks are vulnerable to Siberian elm invasion. This tough exotic plant survives under conditions not easily tolerated by other species, allowing it to invade areas dominated by native plants.



IDAHO STATE  
INVASIVE WEED  
VOLUNTARY

## Alternative SCOTCH ELM

*Ulmus glabra cultorum*

The most popular Scotch elm is known as a Camperdown Elm. It is a small, compact weeping tree that would make a nice accent in any garden. This tree has been grafted to get the desired effect of the weeping branches that will eventually reach the ground. This variety will tolerate drought and flooding. It is resistant to Dutch Elm disease and grows 12-18" per year, eventually reaching 10-12 feet.



## Alternative RIVER BIRCH

*Betula nigra*

River birch is a deciduous medium to large-sized native tree. The bark is light brown to buff, paperlike; has a peeling-back effect on young trees, turning to scaly bark on older trees. This plant has a relatively short life span and a rapid growth rate reaching a maximum height of 35 feet. Many species of birds eat the seeds including wild turkey and grouse. The leaves are browsed by white-tailed deer.



## Alternative COMMON HACKBERRY

*Celtis occidentalis*

Hackberry is a hardy tree. It is forgiving and is considered tolerant of most soil and moisture conditions. Hackberry forms a rounded vase reaching a height of 40 to 80 feet, is a rapid grower, and transplants easily. The mature bark is light gray, rough and corky and its small berry like fruit turns from orange red to purple and is relished by birds. The fruit temporarily stains walks.



*Additional Recommended Alternatives*

Hackberry - *Celtis reticulata*

CARDENING  
Woody



## TREE OF HEAVEN

*Ailanthus altissima*  
Tree-of-heaven can reach 80 feet in height.

The male and female flowers occur on separate plants. Flowers occur in large terminal clusters and are small and pale yellow to greenish. All parts of the tree, especially the leaves and flowers, have a nutty or burned nut odor. Tree-of-heaven is a fast-growing tree and a prolific seeder, that can take over sites, replacing native plants and forming dense thickets.



IDAHO STATE  
INVASIVE WEED  
VOLUNTARY

## Alternative THORNLESS COCKSPUR HAWTHORN

*Crataegus crataegus var. inermis*

Thornless cockspur hawthorn features extremely unique horizontally-tiered branches a nice texture to the landscape. It emerges in late spring with beautiful clusters of white flowers. Its deep green leaves turn to a striking red/orange in the fall. The showy red berries emerge in early fall and persist through winter, adding significant winter interest. The Thornless Cockspur Hawthorn, is completely thornless.



ALTERNATIVE



## Alternative SMOOTH AND STAGHORN SUMAC

*Rhus glabra* and *Rhus typhina*

Sumac is a deciduous woody perennial that grows in clumps or alone as a small tree. Usually sumacs don't get much taller than 15 feet. Leaflets turn bright colors before falling off in the fall. The appearance of its branched stems, which are covered with soft hairs, resembles that of deer's antlers. Red fruits form in dense, upright clusters that look like hairy cones located at the tips of branches.



ALTERNATIVE



## Alternative THORNLESS COMMON HONEYLOCUST

*Gleditsia triacanthos inermis*

Thornless common honeylocust is a large tree with an open, flattened crown, sometimes growing to 80 feet. This plant is hardy and often used for shade, hedges and for attracting wildlife. Some forms have seed pods with sap resembling honey. Other forms of honeylocust have thorns, often used for pins. Tree turns a beautiful color of bright yellow in the fall and provides dappled shade, allowing grass to grow well underneath.



ALTERNATIVE



Additional Recommended Alternatives

Northern Catalpa - *Catalpa speciosa*



## BLACK LOCUST

*Robinia pseudoacacia*



The black locust can reach 90 feet tall when mature. It flowers from May until June and has a very strong odor. It grows spontaneously on almost any kind of soil, expanding readily into areas where shade reduces competition from other plants. Dense clones of locust create shaded islands with little ground vegetation. The large, fragrant blossoms of black locust compete with native plants for pollinating bees.



IDAHO STATE  
INVASIVE WILD  
VOLUNTARY

## Alternative KENTUCKY COFFEE TREE

*Gymnocladus dioica*

This tree reaches heights of 60 to 100 feet. It is closely related to the honeylocust. This deciduous tree is ideal as a shade tree on larger, ungroomed properties. Colonists used the large seeds to make coffee, but when eaten raw, the seeds are poisonous. The bark is deeply furrowed and dark brown in colour. It adapts well to urban conditions. Fall color is yellow turning to orange.



ALTERNATIVE



## Alternative TULIP TREE

*Liriodendron tulipifera*

Tulip tree has a narrow crown that spreads with age, and large showy flowers resembling tulips or lilies, star-shaped foliage and growing up to 50 feet. The leaves are waxy and smooth, turning bright gold in fall. Showy, yellow-orange, tulip-like flowers are often missed because they are up high in the tops of the trees. Cone-shaped seedheads remain after leaves have fallen.



ALTERNATIVE



## Alternative SHADEMASTER HONEYLOCUST

*Gleditsia triacanthos 'Shademaster'*

This is a fast-growing, spreading deciduous tree, with thorns on its trunk and branches. Its leaves are glossy and dark green (yellow in fall) and are pinnate with 14 - 24 lance-shaped leaflets. In fall seed pods are borne. An excellent street and lawn tree that does well in extreme heat and cold. Seems to almost thrive where seasons are defined. Not picky about soil. It does not cast a heavy shadow, making growing grass underneath quite easy.



ALTERNATIVE



*Additional Recommended Alternatives*



# *Contributors to Gardening & Landscaping in Idaho*

**Idaho State Department of Agriculture  
Idaho Invasive Species Council  
Idaho Nursery and Landscape Association  
Idaho Botanical Garden  
Idaho Preferred®  
College of Western Idaho  
College of Southern Idaho  
Urban and Community Forestry, Idaho Dept. of Lands  
University of Idaho  
Kootenai County  
Bureau of Land Management**

While most exotic plants do not become problems in our environment, a few have become invasive somewhere in the state of Idaho. When these plants spread to wild and agricultural areas, they cause serious problems. For example, invasive knotweed and salt cedar are changing our riverbeds, yellow flag iris and purple loosestrife are altering our wetlands and streamsides, and oxeye daisy is degrading our meadows and rangeland.

This booklet represents the collaboration of non-profit conservation groups, state, federal, and county governments, and the nursery industry as listed above. We believe that preventing introductions is the most efficient way to reduce the spread and impact of invasive species. Whether you are looking for a new and exciting plant to add to your garden, or you are looking to replace invasive plants in your yard, we hope this booklet will be a valuable resource. Working together, we can ensure that future generations enjoy pristine wild areas in the state of Idaho.

## *Gardening and Landscaping for Idaho*

is published by the Idaho Nursery and Landscape Association in conjunction with the Idaho State Department of Agriculture. For further information contact the ISDA's Invasive Species Coordinator, Amy Ferriter at ph: (208) 332-8686; fax: (208) 334-2840  
email: [invasivespecies@agri.idaho.gov](mailto:invasivespecies@agri.idaho.gov) website: [www.agri.idaho.gov](http://www.agri.idaho.gov)

*Invasive Plants to Phase Out*